

## SECTION 08450 - ALL-GLASS ENTRANCES AND STOREFRONTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Interior all-glass entrance systems (shell and tenant).
  - 2. Interior all-glass clerestory systems (tenant only).
- B. Related Sections include the following:
  - 1. Division 1 Section "LEED Requirements" for additional information concerning LEED and the environmental goals for the project.
  - 2. Division 1 Section "Construction Waste Management" for handling of product rejects, scrap, waste materials, and packing materials.
  - 3. Division 7 Section "Joint Sealants" for joint sealants installed at interface of all-glass systems and other building components.
  - 4. Division 8 Section "Glazing" for glass components incorporated in all-glass entrances.
  - 5. Division 8 Section "Door Hardware" for lock cylinders installed in all-glass entrance locksets.

#### 1.3 PERFORMANCE REQUIREMENTS

- A. Provide systems, including anchorage, capable of withstanding loads indicated without structural failure, deflection exceeding specified limit, support components transferring stresses to glazing, and glazing-to-glazing or glazing-to-support contact as determined by structural analysis.
  - 1. Structural Loads:
    - a. Seismic Load: For Interior application.
  - 2. Deflection Normal to Glazing Plane: Limited to 1/175 of clear span.

#### 1.4 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Show fabrication and installation details, including the following:
  - 1. Plans, elevations, and sections for glass system and art glass.

2. Details of fittings and glazing.
  3. Hardware quantities, locations, and installation requirements.
  4. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
1. Stainless Steel: 6-inch- long sections of patch fittings, rails, and other items.
- D. Qualification Data: For professional engineer.

## 1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with all-glass systems by field measurements before fabrication and indicate measurements on Shop Drawings.
1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating all-glass systems without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions.

## 1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of all-glass systems that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following:
1. Structural failures.
  2. Deterioration of metals, metal finishes, and other materials beyond normal wear.
  3. Failure of operating components to function normally.
- B. Warranty Period: Two years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis-of-Design Product: The design for all-glass systems is based on Insulite Glass Co., Inc; 7800 Frontier Circle, Olathe, Kansas 66061; Contact: Craig McLain 913.780.2233, Mobile 913.208.6168 with Blumcraft hardware. Subject to compliance with requirements, provide the named product or a comparable product by:
1. ACI Distribution.
  2. Blumcraft of Pittsburgh.
  3. Guardian Industries Corp./Float Glass Division.

## 2.2 MATERIALS

- A. Glass: Refer to Division 8 Section "Glazing" for glass components and glazing accessories.
  - 1. Patterned Art Glass Type E is to be sent to Skyline Design for pattern.
- B. Aluminum: ASTM B 221, with strength and durability characteristics of not less than alloy 6063-T5.
  - 1. Stainless-Steel Cladding: ASTM A 666, Type 302 or 304.

## 2.3 COMPONENTS

- A. Patch Fittings: Stainless-steel-clad aluminum.
- B. Sidelight Channels: Recessed continuous head channels for door and sidelight. Rip for glazing sidelight panel, Match fitting-metal finish, unless otherwise indicated.
- C. Bottom Door Rails: 3-3/8 inch, square shoulder full rails.
- D. Bottom Sidelight Channel: 3-3/8 inch, square shoulder full rails. Align with bottom door rails.
- E. Accessory Fittings: Match patch fitting metal and finish for the following:
  - 1. Header: 2" x 6" continuous over door and sidelight. Rip for glazing sidelight panel.
  - 2. Overhead doorstop.
  - 3. Recessed Header 2" x 6" continuous over door and sidelight. Rip for glazing sidelight panel.
- F. Recessed Header and Sill Channel (Sidelights at Clerestory for Tenant only): 1-3/4 inch stainless steel recessed head channel and 1 inch recessed sill channel as indicated on the drawings.
- G. Anchors and Fastenings: Concealed.

## 2.4 HARDWARE

- A. General: Heavy-duty hardware units in sizes, quantities, and types recommended by manufacturer for all-glass entrances indicated. For exposed parts, match fitting metal and finish.
- B. Concealed Overhead Closers and Bottom Floor Pivots: BHMA A156.4 and BHMA A156.8, Grade 1; including overhead concealed, barrier free interior, doorstop 6" surface applied, surface applied center pivot bottom pivot, and accessories required for complete installation.
  - 1. Swing: Single acting pair.
  - 2. Closer: Dorma RTS-88 BFI overhead concealed barrier free interior. Comply with requirements of authorities having jurisdiction or the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)," whichever are more stringent.
  - 3. Maximum Opening Force:
    - a. Interior Doors: 5 lbf.

4. Doorstop: 6 inch surface applied.
  5. Top Door Patch: Dorma PT22.
  6. Bottom Pivot: Surface applied center pivot.
  7. Electric Strike: Folger-Adams 310 (for shell all-glass entrance only).
- C. Push-Pull / Deadbolt Set: Blumcraft DB-130-F with interior deadlock housing. Pull at full height for shell all-glass entrance. Pull at 7'-2" to align with adjacent wood for tenant all-glass entrances.
- D. Active-Leaf Locksets: Center-housing combination deadbolt and latchbolt with lever handles.
- E. Cylinders: As specified in Division 8 Section "Door Hardware."
- F. Door will be connected to Government-provided / Government-installed Card Reader Security System.

## 2.5 FABRICATION

- A. Provide holes and cutouts in glass to receive hardware, fittings, rails, and accessories before tempering glass. Do not cut, drill, or make other alterations to glass after tempering.
1. Fully temper glass using horizontal (roller-hearth) process and fabricate so, when installed, roll-wave distortion is parallel with bottom edge of door or lite.
  2. Factory assemble components and factory install hardware to greatest extent possible.
  3. Pattern Art Glass Type E is to be sent to Skyline Design for pattern.

## 2.6 STAINLESS-STEEL FINISHES

- A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
1. Remove tool and die marks and stretch lines or blend into finish.
  2. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.
- B. Stainless-Steel Finish: No. 4, satin finish. Match Architect control sample.
- C. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Install all-glass systems and associated components according to manufacturer's written instructions.
- B. Set units level and plumb.
- C. Maintain uniform clearances between adjacent components.
- D. Lubricate hardware and other moving parts according to manufacturer's written instructions.
- E. Set, seal, and grout floor closer cases as required to suit hardware and substrate indicated.
- F. Joints between sidelight panels are to align per drawings and be ¼ inch space.

### 3.3 ADJUSTING AND CLEANING

- A. Adjust doors and hardware to produce smooth operation and tight fit at contact points and weather stripping.
- B. Remove excess sealant and glazing compounds and dirt from surfaces.

END OF SECTION 08450